

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the present amendments and following discussion, is respectfully requested.

Claims 1-3, 7, 8 and 10-22 are pending. Claims 11-20 have been withdrawn. By this Amendment Claims 4, 5, 6 and 9 are canceled without prejudice or disclaimer and Claims 1, 7, 8, 10 and 21 are amended. No new matter has been added.

Applicants appreciate the courtesies extended to Applicants' representative during the February 27th personal interview. The substance of the discussions held are incorporated into the previous amendments and following remarks and constitute Applicants record of the interview.

Applicants appreciate the Examiner's suggestions made in the June 28, 2006 Office Communication. The claims are further amended based on the Examiner's suggestions.

The Office Action rejects Claim 10 under 35 U.S.C. § 112, second paragraph. Claim 10 is amended to obviate this rejection.

The Office Action rejects Claims 1-7, 10, 21 and 22 under 35 U.S.C. § 102(b) over U.S. Publication No. 2003/0052083 to Kim et al. and Claims 8 and 9 under 35 U.S.C. § 103(a) over Kim et al. in view of Applicants' admitted prior art. These rejections are respectfully traversed.

Before considering the rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103 it is believed that a brief review of the subject matter of the independent claims would be helpful. Amended independent Claim 1 is directed to a method for determining a substrate type. The substrate is disposed in a plasma processing system. The substrate is exposed to a plasma process. An optical signal resulting from an optical emission spectrum of the plasma process performed on the substrate is detected. The optical signal includes an intensity ratio of a first intensity corresponding to a first wavelength band to a second intensity corresponding to a

second wavelength band. It is determined whether the substrate is a correct substrate type or an incorrect substrate type by comparing the optical signal with a threshold value. The threshold value includes setting the threshold value to an average of an intensity ratio to the incorrect substrate type and an intensity ratio corresponding to correct substrate type.

Independent Claim 21 is directed to, *inter alia*, a method including exposing a substrate to a seasoning process in a plasma processing system. The optical signal is detected using optical emission spectroscopy.

With respect to independent Claims 1 and 21, Applicants respectfully disagree with the Office Action's assertion that Kim et al. discloses or suggests a threshold value that is an average of an intensity ratio corresponding to an incorrect substrate type and an intensity ratio corresponding to the correct substrate type. Instead, in Kim et al. it is merely disclosed that a mathematical operation of the first and second signals to determine a value related to a ratio of the first intensity and the second intensity may be performed. See, e.g., Kim et al. at paragraph 23.

With respect to dependent Claim 8, Applicants respectfully disagree with the Office Action's assertion that Kim et al. discloses identifying a substrate type as a seasoning substrate or a bare silicon substrate. Instead, Kim et al. merely discloses that if a substrate property is inadequate or does not fall within a statistically determined range of values or if a process parameter deviates from an acceptable range, then the substrate may be removed or the processing in a particular chamber may be ended or adjusted. See Kim et al. at paragraph 40.

The remaining dependent claims are allowable for at least the reasons discussed above and for the individual pictures they recite. Withdrawal of the rejection of the dependent claims is respectfully requested.

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Reply to communication from the Patent Office mailed June 28, 2006
and to the Office Action of January 11, 2006

For the foregoing reasons, it is respectfully submitted that this application is now in condition for allowance. A Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

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